AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-020

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-020.01
AO-51 Recovered

AMSAT News Service Bulletin 020.01
>From AMSAT HQ SILVER SPRING, MD.
January 20, 2008
To All RADIO AMATEURS
BID: $ANS-020.01

The AO-51 Command Team successfully recovered the satellite this week after its software crashed. Gould, WA4SXM along with Kevin, WA6FWF uploaded and re-started the code. AO-51 is operational in normal mode: V/U analog 145.920/435.300 on TXB & command station digital on TXA.

Heating is the Command Team's main concern during this no eclipse period. Two different strageties have been studied to prevent over-heating from too much solar exposure. The first alternative includes turning the transmitter off to not generate additional heat. The second alternative involves turning the transmitter to as high as power setting as possible to use the sunlight that is converted to electricity which is then radiated out the antenna.

The Command Team decided that the best approach was to use as much energy as possible. When the satellite software crashed Sunday all transmitters stopped operation. They found Battery 1 had a temperature of 41-42 C, which is too hot. Keeping high TX power (2.28W) on TXA for one orbit as soon as command was recovered resulted in the temperature of battery 1 reducing down to 36C.

Gould summarized, "Everything is looking well so far and we are getting consistent data, with the FM repeater transmitter power setting of at 1.12 W". The telemetry link is operating L/U BB mode at 500 mW.

Joe, K3SZH says he was able to contact David, G1OCN via AO-51. It was a short contact since the satellite was only 1 degree above Joe's horizon.

[ANS thanks Gould, WA4SXM and the AO-51 Command Team for the above information]

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SB SAT @ AMSAT $ANS-020.02
AMSAT Maryland Lab Update

AMSAT News Service Bulletin 020.02
>From AMSAT HQ SILVER SPRING, MD.
January 20, 2008
To All RADIO AMATEURS
BID: $ANS-020.02

Bob, KF4KSS, AMSAT Lab Manager provided an update on the work to bring the new Pocomoke City, MD facility shared with the Hawk Institute of Space Sciences on-line.

+ January will close the cleanroom construction activities.

+ February will begin the tower and all the RF for the satellite control station including U, V, L, S and HF bands. Details will be published as they are completed.

+ After the tower installation, we will begin work on the engineering unit of the structure for the AMSAT Eagle amateur radio satellite. We plan on having parts of it complete in time for the Dayton Hamvention in May.

+ An on-line gallery of Lab pictures can be found at: http://picasaweb.google.com/bob2leo

[ANS thanks Bob, KF4KSS for the above information]

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SB SAT @ AMSAT $ANS-020.03
P3E C-Band Receiver Construction Completed, Testing Begins

AMSAT News Service Bulletin 020.03
>From AMSAT HQ SILVER SPRING, MD.
January 20, 2008
To All RADIO AMATEURS
BID: $ANS-020.03

Peter Gï¿½lzow, DB2OS, wrote from Marburg, Germany reporting that the AMSAT-DL C-Band receiver for P3E is completed and currently under testing. The receiver was developed by Volker Winterscheid, DF7IT. The 5.6 GHz receiver is housed in a 74x74x30 mm module Which contains a pre-amp, mixer to 10.7 MHz IF, passband filters, and AGC system.

Except for the setting of the AGC time constant, all electrical work is completed on the module. Testing is also being done for selectivity and rejection of adjacent weather radar signals in this band.

More detailed information on the C-band RX for P3-E will appear after completion of the tests in AMSAT-DL Journal.

[ANS thanks Peter Gï¿½lzow, DB2OS for the above information]
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SB SAT @ AMSAT $ANS-020.04
Six CubeSats to Launch From India

AMSAT News Service Bulletin 020.04
>From AMSAT HQ SILVER SPRING, MD.
January 20, 2008
To All RADIO AMATEURS
BID: $ANS-020.04

Six University Cubesat/Amateur Radio satellites are planned for launch
in early March, 2008 from India. Full satellite information for each
is too lengthy for complete coverage here. Below is a summary of the
satellites and their frequencies and operating modes (if known).

Links to the University CubeSat Team's web pages with many additional
mission details can be found at:
http://www.uk.amsat.org/
http://showcase.netins.net/web/wallio/CubeSat.htm (W0RPK CubeSat Page)

CANX-2
University of Toronto (Canada)
2m CW TLM plus 70cm uplink/13cm downlink (Not AX.25)

AAUSAT-II
Aalborg University (Denmark)
437.425 AFSK & FSK up/downlink
1200-9600bps AX.25
FM CW TLM

COMPASS-1
University of Applied Sciences (Germany)
Primary telemetry downlink: 437.405 9600bps FSK AX.25
Beacon downlink: 437.275 CW

DELFI-C3
Technical University of Delft (Netherlands)
Primary telemetry downlink: 145.870 MHz 1200 Baud BPSK AX.25 400mW
Backup telemetry downlink: 145.930 MHz 1200 Baud BPSK AX.25 400mW

The satellite will be in telemetry only mode for approximately
the first three months of the mission, after which it is switched
to linear transponder mode.
Downlink: 145.880 - 145.920 MHz (inverting) 400mW PEP
Uplink: 435.570 - 435.530 MHz
Transponder mode beacon: 145.870 MHz CW (10dB below transponder PEP)

CUTE 1.7+APD II
Tokyo Institute of Technology (Japan)
SRLL protocol

SEEDS
Nihon University (Japan)
437.485MHz AX.25 (450mW)
CW (90mW)

[ANS thanks Trevor, M5AKA, and Ralph, W0RPK for the above information]
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SB SAT @ AMSAT $ANS-020.05
Opportunity to Help With AMSAT's EaglePedia

AMSAT News Service Bulletin 020.05

>From AMSAT HQ SILVER SPRING, MD.
January 20, 2008
To All RADIO AMATEURS
BID: $ANS-020.05

AMSAT is looking for two to three motivated individuals interested in helping with AMSAT's EaglePedia. EaglePedia is a Wiki and is the central repository for all information on AMSAT's upcoming Eagle spacecraft and possible future missions. AMSAT engineers and the general public will be accessing EaglePedia.

Volunteers will be responsible for re-organizing the current Wiki layout, adding new content, and supporting the AMSAT Engineers as they design, build and organize the project's documentation. Ideal candidates will have technical writing, web development, HTML and Wiki experience, possibly with technical backgrounds (hopefully you all have this already!). Knowledge of WikiMedia, MySQL, UNIX and spacecraft engineering and project management is a plus (but not required).

This is a fantastic oppurtunity to support one of AMSAT's most ambitious projects!

Please contact Dave, N0TGD (hartzell -at- gmail.com) directly for more information or to communicate your interest in helping AMSAT-NA! Please put "EaglePedia" somewhere in the subject line.

[ANS thanks Dave, N0TGD for the above information]

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SB SAT @ AMSAT $ANS-020.06
ARISS Status Report for the Week of January 14, 2008

AMSAT News Service Bulletin 020.06
>From AMSAT HQ SILVER SPRING, MD.
January 20, 2008
To All RADIO AMATEURS
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1. ARISS School Contacts Status

Due crew schedules onboard the ISS, no ARISS contacts are planned at this time. The ARISS team expects contacts to resume once STS-122 launches in early February.

2. Astronaut Training Status

Timothy Creamer, KC5WKI, received training on the ARISS basic radio operations and school contacts on Tuesday, January 8. Creamer is a backup crew member for the Expedition 18 mission.

Koichi Wakata, KC5ZTA, and Soichi Noguchi, KD5TVP, will be scheduled for training on ARISS radio operations and school contacts in the near future. Wakata is scheduled to fly on Expedition 18; Noguchi is slated as his backup.

Two training sessions have also been scheduled for Russian crew members on January 16 and 24.

3. ARISS International Team Meeting Held

Minutes of the December ARISS teleconference have been posted.
See: http://www.rac.ca/ariss/arisstel20071218.htm
The next ARISS teleconference will be held on January 22.

4. South Korean will Participate in ARISS Contact

South Korean spaceflight participant Ko San holds a South Korean amateur radio license. San plans to participate in an ARISS contact while aboard the ISS. He will fly on a Russian Soyuz spacecraft with Expedition 17 crew members Sergei Volkov and Oleg Kononenko slated to launch on April 8, 2008.

[ANS thanks Carol, KB3LKI for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM